

Amendment
Serial No. 10/779,446

5000-1-522

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REMARKS

Reconsideration of all grounds of objection and rejection and allowance of all the pending claims are respectfully requested in light of the above amendments and the following remarks. Claims 1-14 are pending in the application, of which claims 1, 8, 9 and 14 are independent claims. Claims 8-9 have been withdrawn from consideration due to the election requirement.

Claims 1-5 and 14 stand rejected under 35 U.S.C. §103(a) as allegedly being obvious over Admission (hereinafter "APA" for Admitted Prior Art of FIG. 1) in view of Kamalov *et al.* (U.S. 7,149,424) ("Kamalov"). Claim 6 stands rejected as allegedly being obvious over APA and Kamalov as applied to claims 1-5 and 14, and further in view of Ahn *et al.* (B: Ahn *et al.*, "A Symmetric-Structure CDMA-PON System and Its Implementation", IEEE Photonics Technology Letters, Vol. 14, No. 9, September 2002) ("Ahn"). Claim 7 stands rejected under 35 U.S.C. §103(a) as allegedly being obvious over APA, Kamalov and Ahn as applied to claim 6, and further in view of DeCusatis *et al.* (U.S. 7,061,944) ("Decusatis"). Claims 10-13 stands rejected under 35 U.S.C. §103(a) as allegedly being obvious over APA and Kamalov as applied to claims 1-5 and 14, and further in view of Argon *et al.* (U.S. 6,847,760) ("Argon"). Applicant respectfully traverses these grounds of rejection for the reasons indicated herein below.

Claim 1 has been amended to recite in part a passive optical network with reduced optical beat noise interference, which a plurality of ONUs, each having an assigned code, which includes being configured for demodulated received signals that are split into a downstream signal and error information comprising error correction codes

Amendment
Serial No. 10/779.446

5000-1-522

from a central office configured for controlling a non-wavelength division multiplexed (non-WDM) light source for the plurality of ONUs. Support is found in the specification at least at page 3, lines 6-12 (discussing that problem that WDM does not have optical beat interference noise and requires expensive cost light sources), page 15, lines 19-22, page 4, lines 19-22, page 6, lines 7-10 and 20-22, page 6, lines 3-5, and page 11, line 1, to page 12, line 2. Claim 14 has been amended in a similar fashion.

Applicant respectfully submits that the combination of APA and Kamalov clearly would have failed to render either of claims 1 or 14 obvious to a person of ordinary skill in the art at the time of invention. Nor would the combination of elements recited in the claims have been within the ordinary level of skill in the art.

For example, with regard to the combination of the APA and Kamalov, Kamalov clearly discloses a WDM system and does not address in any way the issues with optical beat interference noise. On the other hand, the APA (FIG. 1) merely shows a conventional passive optical network that uses PN codes and suffers from the problems of optical beat interference noise disclosed at least in the specification at page 5, lines 1-5, and page 6, lines 7-13. Thus, the combination of APA and Kamalov, would not have rendered either of independent claims 1 and 14 obvious at the time of invention. The use of FECs and feeding back the bit error rate disclosed by Kamalov in combination with the APA of FIG. 1 does not render obvious a solution (the claimed invention) to a problem that was well-known in the art.

Applicant also reiterates that the APA clearly teaches away from references using WDM (specification at page 3, lines 6-12 (discussing that problem that WDM does not have optical beat interference noise and requires expensive cost light sources) and page

Amendment
Serial No. 10/779,446

5000-1-522

15, lines 19-22) and independent claims 1 and 14 recite a "non-WDM light source". Applicant respectfully submits that despite boilerplate statements made to the contrary in Kamalov, that a WDM system is the only system contemplated by this reference. Thus, the combination does not obviate claim 1 as the reference and APA teach away from each other, and their combined "teachings" would not have rendered the claimed invention obvious at the time of invention.

In addition, even if a person of ordinary skill in the art were to have combined the APA and Kamalov, there is no suggestion as to how a CDMA PON would provide an ONU with using FEC and pseudo-noise, for example, to modulate/encode a transmitted signal to the OLT, which demodulates the signals, and generates error codes in a quality monitoring function that is transmitted back to the ONU in the form of error correction codes along with the assigned pseudo-noise code for particular ONU. Absent in the art is knowledge regarding the Applicant's claims, and Applicant respectfully reiterates that the claimed invention is being used as a roadmap in which items that teach away from each other are being combined improperly.

For at least the above reasons, Applicant respectfully submits that claims 1 and 14 would not have been obvious to a person of ordinary skill in the art in view of the combination of APA and Kamalov.

With regard to the rejection under 35 U.S.C. §103(a), Applicant respectfully submits that the United States Court of Appeals for the Federal Circuit required a showing of an un rebutted prima facie case of obviousness (*In re Rouffet*, 149 F.3d 1350, 47 USPQ2d 1453 (Fed. Cir. 1998) (citing *In re Deuel*, 51 F.3d 1552, 1557, 34 USPQ2d 1210, 1214 (Fed. Cir. 1995))). According to United States Court of Customs

Amendment
Serial No. 10/779,446

5000-1-522

and Patent Appeals, the predecessor to the Federal Circuit, the *prima facie* case can be established only if the prior art references, among others, teach all features in the claims (*In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1970); see also **MPEP 2143.03**), or if the claim or claims recite features as combined in the claims that would have been within the ordinary skill in the art at the time of invention (*KSR International Co. v. Teleflex Inc. et al.*, No. 04-1350, U.S. Supreme Court, decided April 30, 2007).

With regard to the above paragraph, Applicant respectfully submits that the Office Action does not set forth a proper *prima facie* case of obviousness under 35 U.S.C. §103(a) because the features, as combined in the claims, are clearly not obvious over the combination of APA and Kamalov, or within the level of ordinary skill in the art, and Applicant's claimed invention solves a longstanding problem.

In view of the all of the above, Applicant respectfully requests reconsideration and withdrawal of the rejection of independent claims 1 and 14.

With regard to the other claims in this application, which are each dependent from independent claim 1, are therefore believed patentable for at least the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual consideration of the patentability of each claim on its own merits is respectfully requested. Applicant respectfully submits that the inclusion of Ahn, DeCusatis, and/or Argon with the combination of APA and Kamalov still would have failed to render either of independent claims 1 or 14 obvious to a person of ordinary skill in the art.

FEB 04 2008

Amendment
Serial No. 10/779.446

5000-1-522

For all the foregoing reasons, it is respectfully submitted that all the present claims are patentable in view of the cited references. A Notice of Allowance is respectfully requested.

In the event that any additional fee is required to continue the prosecution of this Application as requested, please charge such fee to Deposit Account No. 502-470. If the Examiner has any questions regarding this Application, it is respectfully requested that the Applicants' attorney of record be contacted at the below-noted telephone number.

Respectfully submitted,

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